



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,239	11/29/2000	James F. Munro	1571.2001-002	9606

7590 07/18/2002
Robert T Conway Esq
Hamilton Brook Smith & Reynolds P C
Two Militia Drive
Lexington, MA 02421-4799

EXAMINER

LEE, Y MY QUACH

ART UNIT	PAPER NUMBER
----------	--------------

2875

DATE MAILED: 07/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/726,239

Applicant(s)

MUNRO ET AL.

Examiner

Y. QUACH LEE

Group Art Unit

2875

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 4/30/2002
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1 to 34 is/are pending in the application.
- Of the above claim(s) 13 to 15, 19 to 24 and 34 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1 to 12, 17, 18, and 25 to 33 is/are rejected.
- ☒ Claim(s) 16 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 5
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

DETAILED ACTION

Response to Election/Restrictions

1. Applicant's election without traverse of group 1, first species, figures 1 and 2, claims 1 to 12, 16 to 18 and 25 to 33 in Paper No. 8 is acknowledged. Claims 13 to 15, 19 to 24 and 34 are therefore withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of “a second axis different than a first axis” as claimed in claim 5, “the second axis substantially perpendicular to the first axis” as claimed in claim 6, “the second axis offset about 60 degrees relative to the first axis” as claimed in claim 7, “a third axis different than the second axis and the first axis” as claimed in claim 8, “the third axis offset about 60 degrees relative to the second axis” as claimed in claim 9, “more than one plane on at least one facet” as claimed in claim 16, “curved prism tips” as claimed in claims 17 and 25, “curved valleys” as claimed in claims 18 and 26, “the prism arrays periodically alternate orientation along a second axis” as claimed in claim 28, “the prism arrays periodically alternate orientation along a third axis” as claimed in claim 29, “periodically alternating the plurality of tilted prism arrays along a second axis different than the first axis” as claimed in claim 32, and “periodically alternating the plurality of tilted prism arrays along a third axis different than the second axis and the first axis” as claimed in claim 33 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: On page 1, line 18, the term “sides” is incorrect in view of the following term “each” on the same line and page. On page 4, line 26, the serial number for the U.S. application has not been provided. Appropriate correction is required.

Art Unit: 2875

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. The specification is objected to under 35 U.S.C. 112, first paragraph, as failing to provide an enabling disclosure of the invention. For instance, it is not clear whether the cross-sectional view taken along line 10-10 as seen in figure 10, on line 7 of page 10, is referred to the cross-sectional view of the prism 12' or is referred to the cross-sectional view of the row of linear prisms having peaks 26 and valleys 28 formed perpendicular to the longitudinal axis of the prism 12' as recited on lines 5 to 6 of page 10? On page 10, lines 11 to 14, the description is not understood, illustration of this description on the drawings would be helpful. Appropriate correction is required.

Claim Objections

6. Claims 25 and 26 are objected to because of the following formalities: Claims 25 and 26 are identical to claims 17 and 18. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. Claims 3, 5 to 9, 28, 29, 32 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, the language "the linear prisms have included angles of 25, 90 and 65 degrees" is not clear. Does it mean that different prisms have different angles or each prism has the angles of 25, 90 and 65 degrees? It is also not clear which angles are in respect to what frame of references?

In claims 5 to 8, there is no clear antecedent basis for "the first axis". The frame of reference for "the first axis" has not been defined.

In claim 28, it is not clear how can the prism arrays periodically alternate ... along a second axis while the same prism arrays already periodically alternate ... along a first axis as recited in claim 27?

In claim 29, it is not clear how can the prism arrays periodically alternate ... along a third axis while the same prism arrays already periodically alternate ... along a second axis as recited

Art Unit: 2875

in claim 28 and the same prism arrays already periodically alternate ... along a first axis as recited in claim 27?

In claim 32, it is not clear how can the prism arrays be periodically alternating along a second axis different than the first axis while the same prism arrays are periodically alternating along a first axis as recited in claim 31?

In claim 33, it is not clear how can the prism arrays be periodically alternating along a third axis different than the second axis and the first axis while the same prism arrays are periodically alternating along a second axis as recited in claim 32 and the same prism arrays are periodically alternating along the first axis as recited in claim 31?

Claim 9 depends on rejected claim 8 and as such is also rejected.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 4, 10, 12, 27 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Rudisill et al.

Rudisill et al. show a light source (71, figure 5c), a substantially solid light guide (figure 5c) receiving light radiating from the light source, a plurality of tilted prism arrays (figure 5c) including linear prisms for redirecting the light in a first direction exiting the light guide, the prism arrays periodically alternate orientation along the light guide in a first axis, the prism arrays including peaks and valleys (figure 5c) along a first axis, and the prism arrays disposed on a top surface of the light guide.

10. Claim 31 is rejected under 35 U.S.C. 102(b) as being anticipated by Rudisill et al.

Rudisill et al. show the steps of providing a light source (71, figure 5c), receiving light radiating from the light source in a light guide (figure 5c), and redirecting the light in a first direction with a plurality of tilted prism arrays (figure 5c) that periodically alternate orientation along a first axis.

Art Unit: 2875

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudisill et al.

Rudisill et al. disclose the invention substantially as claimed with the exception of having the prism arrays including the angles as claimed and the light guide including the polymethyl methacrylate as claimed. However, it would have been an obvious matter of design choice to make the prism arrays with the angles as claimed and to make the light guide with polymethyl methacrylate as claimed, since such a modification would have involved a mere change in the size and material of a component. The changes of the size of the angles of the prisms and the material of the light guide are generally recognized as being within the level of ordinary skill in the art.

13. Claims 1 to 4, 10 to 11, 17, 18 and 25 to 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (prior art cited by applicant).

Ishikawa et al. disclose a light source (2), a substantially solid light guide (1) receiving light radiating from the light source, a plurality of prism arrays (5, figure 36) including linear prisms for redirecting the light in a first direction exiting the light guide, the prism arrays periodically alternate orientation along the light guide in a first axis, and the prism arrays including curved peaks and curved valleys (figure 36) along a first axis. However, the prism arrays as shown on figure 36 of Ishikawa et al. are not titled. Note that figures 14 to 17 of Ishikawa et al. teach that the prism arrays are tilted toward the light source such that a bright surface light source with uniform brightness can that obtained. Therefore, to tilt the prism arrays of figure 36 of Ishikawa et al. toward the light source(s), as shown by figures 14 to 17 of Ishikawa et al., would have been obvious to one skilled in the art to minimize non-uniformities of the light extracted from the light guide to obtain uniform intensity. In regards to claims 3 and 11, it would have been an obvious matter of design choice to make the prism arrays with the

Art Unit: 2875

angles as claimed and to make the light guide with polymethyl methacrylate as claimed, since such a modification would have involved a mere change in the size and material of a component. The changes of the size of the angles of the prisms and material of the light guide are generally recognized as being within the level of ordinary skill in the art.

14. Claims 5 to 9, 28, 29, 32 and 33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

15. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


16. Claims 5 to 9, 16, 28, 29, 32 and 33 contain allowable subject matter because the prior art does not teach the combination of the periodically alternating orientations of the prism arrays along different axes with peaks and valleys along different axes as claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Y Quach Lee whose telephone number is 703-308-1939. The examiner can normally be reached on Tuesday and Thursday from 8:30 am to 4:30 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Y. Q.
July 3, 2002


Y Quach Lee
Patent Examiner
Art Unit 2875